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AID IN THE DEVELOPMENT PROCESS

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The history of economic thought on foreign aid is somewhat peculiar. The phenomenal success of the Marshall Plan in the late 1940s and 1950s led many to believe that similar transfers to developing countries would permit their comparably spectacular transformation. That belief had two intellectual underpinnings. The first was the Harrod-Domar model, which extended the Keynesian emphasis on investment to include its capacity-increasing effects. The second was economists' emphasis on physical capital and the view that shortage of capital largely accounted for the poverty of developing countries. While it was recognized that many other factors would be needed to achieve satisfactory growth, the critical bottleneck was believed to be the shortage of investment because of low savings rates.

The role for foreign aid followed logically from this analysis. If investment was the bottleneck, the return on additional investment in developing countries would be higher than in developed countries. In the late 1940s and early 1950s, it seemed inappropriate to assume that the international capital market functioned smoothly. Hence few could doubt that, if capital were to flow to poor countries, it would of necessity be official capital—which was equated with foreign aid.

Since the 1950s, understanding of development has deepened enormously. The optimism inherent in the view that capital was the main

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This essay examines the role of aid in development. It focuses on particular issues and is by no means a complete survey of the literature. In the course of writing, I have benefited from valuable comments and suggestions from many people, including Jagdish Bhagwati, Hollis Chenery, Gregory Ingram, Uma Lele, Ronald McKinnon, Allan Meltzer, Constantine Michalopoulos, Sherman Robinson, Vernon Ruttan, T. W. Schultz, T. N. Srinivasan, and Ernest Stern. Needless to say, on a subject as broad as this, none of them would associate himself with everything stated herein. I am also grateful to Suan Ying for valuable research assistance.

thing lacking has been replaced by an appreciation of the complexity of development. There has been increased recognition of the need for human capital formation, the importance of developing well-functioning markets, the challenges of agricultural development, the role of trade, the interactions between economic policy and politics, and so on. Current thinking would place equal stress on resource accumulation in both a quantitative and qualitative sense, and on increased efficiency of resource use in the economic, managerial, and engineering senses of the term. Achieving these goals would depend on several factors, including the incentives facing individuals for the accumulation and efficient use of resources, the development of well-functioning markets, efficient governmental provision of infrastructural services, and institutional development in both the private and public sectors.

Despite this advance in understanding, there has not been a systematic reexamination of aid and its role in development. This essay will examine that question. It concentrates on the role of aid in facilitating development and growth, so its emphasis is on the macroeconomic aspects of aid. Much that has been learned about specific sectors—education, power and irrigation, agricultural research and extension, and so on—is not covered here.[1]

Throughout, the focus is on the economic effects of aid and the ways in which its utilization affects the growth rates of developing countries. Despite that focus, it is important to recognize that much foreign assistance has motives that may have little to do directly with accelerating economic growth. Donors may wish to enhance the military prowess of a recipient country, to promote their commercial interests, to support a friendly government in power, and to acquire goodwill now in the expectation that it will be politically valuable later. In some of these cases, diplomatic realities may preclude using the donor's resources for developmental purposes. In others, use of aid in support of development could be consistent with the donor's objectives. Hence, although the analysis will be conducted throughout in terms of the impact of aid on the recipient's growth prospects, it should be borne in mind that the objectives of aid have often been military or political, and those objectives may or may not have been consistent with using the resources to enhance growth. Ergo, the developmental impact of aid can be substantially reduced.

As background for the analysis of the potential and actual role of aid in development, the first section below presents the various concepts and definitions of aid that are used; the second concerns the development process as it is at present understood. The following three sections examine in turn the rationale for aid, "aid effectiveness"—that is, the degree to which different types of aid are conducive to accelerating development—and some criticisms of foreign aid. A final section summarizes the lessons that have been learned about what aid works and

what does not, and outlines some issues on which research could shed further light.

Capital and Official Flows, ODA, and Concessional Aid

An official flow from one country to another takes place whenever the government of the originating country provides command over resources to the other without a current commercial quid pro quo. It might obtain goodwill, rights to military bases, or political support, but it does not receive direct payment simultaneously.

An official flow could consist, at one extreme, of a loan at near-market rates of interest. At the other, it could be an outright grant of convertible currency. Between these extremes, it could be a loan at a below-market interest rate or with a grace or maturity period longer than that commercially obtainable. In these cases, the value of the flow can be calculated as the difference between the amount received and the present value of the repayment stream (see Pincus 1963 or Schmidt 1964). Thus, the value of an untied grant would be its face value;[2] the value of a loan at commercial interest rates would be zero. The grant component of an official flow is the percentage by which the present value of the repayment stream falls short of the current value of the flow. Conceptually, this measure is well defined when interest rates are equalized throughout the world. In practice, the Development Assistance Committee of the OECD defines the grant element as the excess of the loan's (or grant's) value over the present values of repayments where, by convention, present values are calculated using a 10 percent rate of interest, and the costs of restricted procurement or other side conditions are not taken into account.

Over the past five years, slightly more than 60 percent of net official flows have been official development assistance (ODA). The rest were official and officially supported export credits (20 percent) and other flows at near-commercial rates, including nonconcessional lending of the multilateral organizations (10 percent). ODA is defined as a flow with a grant element greater than 25 percent, the purpose of which is at least loosely related to economic development. In this essay, ODA will be used synonymously with foreign aid and foreign assistance.

Official development assistance can take several forms. It might consist of loans at terms more favorable than available commercially.[3] It might be food aid, or a grant or loan that has to be spent in the donor's home market (tied aid). In each case, the grant component can be calculated—although in practice the fair market value of tied aid, food shipments, Russian-built steel plants, and the like is usually not estimated; instead, the donor's accounting of the costs of aid is used as a basis for valuation. In the case of the United States, the value of food assistance was substantially distorted when its shipments of commodities under PL 480 were valued at the farm support prices, which have at times been well above world prices.[4] Beyond these forms of ODA, some aid is given by nongovernmental organizations (NGOs).[5]

Defining aid as capital flows may result in a serious omission. Many observers believe that a very important component of aid is knowledge: education and training, the transfer of technical and institutional know-how (including interactions of donor and recipient that may improve policies and the functioning of domestic markets), and so on. Sometimes this knowledge component may be embodied in aid; it should not be overlooked just because it cannot be quantified.

The Development Process

Most developing countries have factor payments that are a small fraction of their counterparts in developed countries. The average daily wage of an Indian factory worker in 1979, for example, was about $3.35 while that of an American factory worker was $53.20. The traditional trade-theoretic presumption, that factor proportions and a relatively abundant Indian supply of labor might account for this difference, is not—at least superficially—borne out by the facts. In India neither the absolute reward to skills (human capital) nor that to physical capital is evidently higher than in developed countries.

While explanations such as the differing quality of labor undoubtedly account for part of the income differential, they cannot explain it all (see Krueger 1968 for a fuller discussion of this issue). In the early postwar years, the magnitude of the income differences between developed and developing countries led most development economists to the conclusion that conventional economics somehow failed to apply to developing countries.[6] It seemed self-evident that markets had not functioned efficiently, given the extreme poverty and slow growth in most poor countries. From this observation, and the view that capital shortage was the chief bottleneck to development, two propositions followed: (1) governments had a responsibility to intervene to ensure that the capital stock would grow and be appropriately allocated; and (2) although additional investment would have a high rate of return, it would be constrained by low domestic savings rates (as a result of very low incomes)—without foreign assistance, growth would be held back.

The belief that markets failed to work in developing countries might have led to a search for prescriptions to improve them. Instead, consistent with the Harrod-Domar model and shortage-of-capital explanation of underdevelopment, this perception led to an almost exclusive emphasis on increasing capital as the way to raise incomes. To be sure, five-year plans addressed such issues as taxation, education, land tenure, and family planning, but they focused on planned increases in output and investment by economic activity. Reflecting this thrust, much development research centered on techniques for estimating output levels, input-output relations, and investment by sector.

By the end of the 1950s, however, perceptions were changing. Three major, apparently independent, new lines emerged. First, evidence began mounting that markets were functioning substantially better than had earlier been appreciated. Second, Schultz's (1961) pioneering work on the importance of human capital was followed by growing evidence on the significance of the quality of human resources, including education, health, and nutrition. Third, experience with development led many to point to foreign exchange shortages as a critical bottleneck to development.

The major breakthrough with respect to the functioning of markets was also forcefully put forward by Schultz (1964). Schultz's hypothesis, that small farmers were typically maximizers who responded to incentives, was greeted with great skepticism at the time (see, for example, the review by Balogh 1964). Nonetheless, it offered a testable hypothesis that was examined by others whose findings reinforced the original results. Although the implications for development—that behavior will not alter until incentives are changed—were recognized only slowly, the reassertion of the vital role of individual behavior and its determinants was in the longer run crucial to reassessing the role of government in development.

Recognition that human capital and foreign exchange might be scarce helped to move development economists toward a general equilibrium view of development and away from unicausal theories. Although the addition of human capital and foreign exchange to the list of problems for developing countries was a big advance in appreciating the complexity of growth, the phenomenon of poor countries was still attributed to a shortage of resources, which in turn implied that the appropriate remedy remained resource accumulation. Until Schultz's insistence on the rationality of individual actors was more fully appreciated, underlying thinking on the role of government was not challenged.[7]

The foreign-exchange-shortage view is sufficiently important in relation to analyzing the role of aid to receive more consideration. As a starting point, obtaining foreign exchange through concessional aid can be viewed as superior to earning it through exports, since it requires scarce resources to produce the goods that are exported, while the receipt of aid does not (see Johnson 1967 for a full exposition). From this basic line of analysis, aid came to be regarded as a transfer of resources.

In the 1950s, however, many development economists thought the developing countries had little hope of expanding their export earnings (see the classic statement of this view by Prebisch 1950). This "elasticity pessimism," combined with the infant-industry argument, led to the prescription that developing countries would have to foster import substitution if they wanted to develop. Simultaneously, the commodity price boom of 1950–51 broke sharply in 1953–54, when almost all the developing countries' export earnings were concentrated in a few primary commodities.[8]

The policy response was to intensify protection for balance of payments reasons, often with little regard to the original objectives of industrialization. The alternative—adjusting incentives for exporting—was not adopted, partly because of elasticity pessimism. As a consequence of (1) domestic inflation at fixed nominal exchange rates, (2) rising costs of inputs as imports were prohibited once domestic production started, and (3) sharp increases in demand for imports (because of the import intensity of import substitution; see Diaz Alejandro 1965), the growth of export earnings was typically slow, making elasticity pessimism a self-fulfilling prophecy.

Many development plans proved overambitious precisely because the foreign exchange bottleneck forced more import restraint than had been anticipated, and thus checked economic growth. In that context, the two-gap model was developed by Bruno and Chenery (1962) and elaborated in Chenery and Strout (1966). This model had three potentially binding constraints on growth: a savings constraint (which might limit investment), a foreign exchange constraint (which might limit investment because of the high import content of investment), and an absorption constraint (which set an upper limit for the rate of growth). As an empirical assertion, the foreign exchange constraint appeared binding at low levels of income.

In these circumstances, foreign aid was doubly powerful. It not only permitted higher investment via the transfer of resources, but by relaxing the foreign exchange constraint it also allowed the utilization of domestic savings. The model had its critics, notably Findlay (1971) and McKinnon (1964), who highlighted the neglect of price (or incentive) responsiveness inherent in the fixed-coefficients formulation.[9] Nonetheless, the model's elegance and simplicity provided a powerful argument for foreign assistance, as it demonstrated the high marginal productivity of aid.

Later conceptual developments—the responsiveness of small producers to incentives, the importance of human capital—might by themselves have challenged the dominance of the two-gap model. In fact, the challenge came from evidence about the effectiveness of incentives. Both cross-country analysis and individual countries that altered incentives (of which Korea was perhaps the most notable; see Mason and others 1980) showed that exports were indeed responsive to incentives, and that their failure to grow was due more to normal supply responses to, for example, overvalued exchange rates, than to any failure of world demand or structural rigidity.

Once it is recognized that individuals respond to incentives, and that "market failure" is the result of inappropriate incentives rather than of nonresponsiveness, the separateness of development economics as a field

largely disappears (see Lal 1983). Instead, it becomes an applied field, in which the tools and insights of labor economics, agricultural economics, international economics, public finance, and other fields are addressed to the special questions and policy issues that arise in the context of development.[10]

In the conventional framework of economics, differentials in income per head must originate either in differences in the quality and quantity of productive factors available per worker or differences in the efficiency with which factors are employed. To be sure, technology can change over time. Once known, however, its application is seen as an economic phenomenon that entails human capital and appropriate incentives as well as blueprints (see Teece 1977). The modern view of development would therefore focus on both resource accumulation and improving the efficiency of resource use. This latter concern concentrates on improving markets—by institutional methods such as developing the capital market, by governmental provision of public goods such as agricultural research and extension services, and by removing government-imposed impediments to economic efficiency such as import licensing, currency overvaluation, and other regulations that drive a wedge between private and economic profitability.

This is not to downgrade the importance of resource accumulation. All observers recognize that countries with low per capita incomes have little physical and human capital per head, and that increasing that capital is essential to growth. However, given the earlier emphasis on resource accumulation and the fact that many developing countries have dramatically increased savings rates without raising their growth rates, analysis of the efficiency issues has understandably come to the fore in recent years.

Why Official Assistance?

The next question is whether there is an economic (as opposed to humanitarian or political) rationale for official development assistance, concessional or otherwise. Critics of aid have alleged that, if profitable investments are available, private international capital markets will finance them. Insofar as the motive for aid is humanitarian, that is not a criticism (as long as aid does not impair development). Nonetheless, the bigger questions are whether world economic efficiency can be enhanced by official flows at market terms, and whether it can be increased by an official flow that could not be financed at market terms.

Clearly, a recipient's potential welfare could always be increased by a grant, whereas the donor's potential welfare might be reduced. The interesting questions are: (1) given optimal policies in recipient countries (those that maximize the economic welfare of their citizens), can foreign aid enhance worldwide efficiency and be in the economic self-interest, narrowly defined, of both donor and recipient? and (2) are there circumstances in which the answer to the first question is yes, but it would not pay the recipient to accept capital on commercial terms? These two questions are the subject of this section. It is useful to start by assuming, first, that economic efficiency exists in a developing country, in the sense that, given resource constraints, domestic policies are consistent with efficient allocation of domestic resources; and, second, that aid is nothing more than a capital flow. The end of this section will consider how to modify the analysis if aid is viewed as part of a bundled transfer of resources, including institution building, technical know-how, policy leverage, and capital. Throughout this section and the next, the question is the impact of foreign aid on the economic well-being of donor and recipient. Later, when attention turns to particular criticisms of aid, it must be borne in mind that the objectives of donors in giving aid are not always as high-minded or as economic as this discussion suggests, and that aid may fail to achieve greater economic efficiency either because recipients use it inappropriately or because donor objectives are incompatible with the use of aid for economically efficient purposes.

Question 1. *Could official flows improve the welfare of both donor and recipient?*

The answer to this question hinges on whether imperfections in the private international capital market preclude it from equalizing (risk-adjusted) rates of return between donor and recipient. If returns were higher in developing countries, the welfare of both donor and recipient could be improved through official flows. The recipient could service its debt and nonetheless have a higher future income stream than would otherwise be possible. Simultaneously, the donor could obtain a rate of return equal to or greater than that obtainable on other assets.

Consider, first, maximization of world welfare in the context of a simple two-factor neoclassical model. If the usual conditions for economic efficiency are met within individual countries, in the absence of capital flows free trade might fail to equalize factor returns.[11] Gains in world efficiency could then be achieved by developing a means for capital to flow from low-return to high-return countries.

A first conclusion, therefore, is that official flows on commercial terms could not reduce world welfare. Indeed, they would normally be expected to increase world welfare if private financing were not available. This conclusion is based on the assumption that the development assistance permits incremental investments with real returns at least as great as the return to the donor, but for present purposes that is subsumed by the assumption of policy optimality in borrowing countries, even after they receive aid. Another underlying assumption is that behavior in the borrowing country is not influenced—or at least not negatively influenced—by the receipt of official development assistance. Since there is some

basis for thinking that official development assistance is more likely to influence behavior positively (see below), this assumption does not alter the analysis.[12]

Subject to these various qualifications, official flows on commercial terms would not reduce welfare but would increase it if they encouraged improved policies or if private markets failed to supply the capital instead, despite the higher real rates of return.

The remaining question is thus why the private international capital market might fail in this way. In the 1940s and 1950s, thinking on aid hardly addressed this question because the capital markets had broken down in the 1930s and during World War II. By the 1970s, however, they were functioning—if anything by providing too much capital.[13]

After the debt crisis of the early 1980s, however, many analysts doubt whether private flows will resume, at least on a scale that could match the supply of profitable opportunities in developing countries. Some believe that there is a herd instinct among commercial bankers, who overlent in the 1970s and now will be irrationally unwilling to resume lending—even to countries that appear able to borrow and achieve the returns to service their debt (see Guttentag and Herring 1984, for an elaboration of that view). Although other types of private capital may in the future partly compensate for reduced commercial bank lending, they are unlikely to do so to any great extent. This view, if correct, would certainly suggest that official flows at commercial terms could play a larger role than in the 1970s and increase world economic efficiency.

A second source of concern about developing countries' ability to use the private international capital market centers on the "debt overhang." For some developing countries, it is argued, current debts are so great relative to their existing income that increases in future earnings must be tapped to finance their existing obligations. Because foreigners correctly perceive this claim on future income, they will not lend even for new projects that would yield acceptable returns. This inability to insulate new claims from existing debt leaves countries in a vicious circle: they cannot restore creditworthiness without growth, and they cannot grow until creditworthiness is restored. The private capital market may thus fail despite the rational behavior of all participants (see Krueger forthcoming for a fuller discussion), and there is a strong analytical case for official assistance on commercial terms.

Question 2. *Why concessional aid?*

Even though international commercial capital is available and there are projects that would yield the necessary returns, are there circumstances in which it would not pay anyone in the recipient country (including the government) to undertake the project at commercial terms? Most analysts of aid have focused on two reasons why this might be the case:

the gestation or payout period of projects is too long, and the investor cannot fully capture the stream of returns.

Many investments by developing countries do have long gestation or payout periods. One obvious example is in the area of education projects, which occur over a period of a decade or more, followed by an even longer payout. In addition, some investments (in roads, ports, and power stations, for example) have such large indivisibilities that returns are low in their early years.

At a microeconomic level, if a project's repayments stream is not matched with the earnings stream it generates, an investor would not undertake it unless he had other earnings streams (or borrowing possibilities) to service his obligations in the project's early years. One could ask, of course, why the country could not refinance (or borrow more) to cover debt-servicing obligations in the years prior to high returns. In reality, the capital flows to developing countries have had a maturity structure of ten years or less (implicitly even less in the late 1970s, when the inflation premium in the nominal interest rate rose). At a macroeconomic level, therefore, poor countries may be unable to borrow at or near commercial terms to finance much of their infrastructural investment, despite adequate real rates of return in the long run.

A second, related difficulty is that many investments in the early stages of development entail public financing of activities that have significant externalities and for which user charges may not be appropriate. Roads are an example: with initially low utilization and negligible congestion costs, charging users is neither feasible (because collection costs exceed potential revenue) nor desirable (because the marginal cost of use is very low). And the government may not be able to finance the project on anything like commercial terms, even though incomes may be rising and increasing the tax base, because in a poor country only a fraction of incremental income is taxed.

These considerations would appear to have most relevance for the very poorest countries: the ones with high levels of illiteracy, rudimentary transport and communications systems, and low savings rates. It must be emphasized that this case for concessionality is based on the productivity of investment in these countries and is additional to the case based on need or humanitarian motives.

Question 3. *What of aid as a "bundle"?*

This paper has so far treated aid purely as a capital flow. In practice, aid (and other capital, such as direct private investment) can be much more: donors may provide technical assistance with project design, know-how on organization and management, and so on. This assistance has undoubtedly been of great importance in many areas: the green revolution is perhaps the most visible and dramatic example.

For present purposes, however, one aspect of the aid bundle, the policy dialogue, deserves special attention. Recipients may be influenced in their choice of macroeconomic policies in the course of the dialogue, which can take many forms: discussion and persuasion, information on policy effectiveness and techniques for reform, support for reform efforts, and "conditionality"—that is, aid is given only if certain policies are changed. Regardless of the influence used, foreign assistance could certainly become a means of speeding policy reform in developing countries. And, as discussed in the previous section, the main lesson from the past two decades has been the need for an appropriate framework of policies and incentives.

To the extent that donors have influence over recipients' policies, and are willing to use it, they may perform a function for which private capital markets seem ill-suited. Indeed, one might even imagine a world in which donor influence produced such improvement in world economic efficiency that they made large-scale private investment an attractive proposition. In this light, aid and private capital might well be more complementary than substitutes.

Aid Effectiveness

The previous section examined the economic rationale for aid, on the assumption that it would be effectively utilized by the recipient. This section turns the issue round. If a developing country receives foreign aid, how can it best use it to increase its people's welfare?

In assessing empirically the effectiveness of aid, two major difficulties arise. The first, already mentioned, is that the objectives of donors may not be purely economic. However, this section assumes that the donor's aim is to maximize the recipient's welfare. (See Little and Clifford 1965, chap. 3, for an excellent discussion of why such objectives might be consistent with political motives for aid.)

The second difficulty is that aid is typically only a small part of a country's investment. Although the contribution of individual aid-financed projects can be evaluated, it is much harder to estimate aid's contribution to overall growth. Suppose that the cumulative lending of the World Bank has yielded a real rate of return of 10 percent over and above interest charges. According to one estimate, all that lending might have increased developing countries' incomes by less than 2 percent in 1980 (see Krueger 1983). If during 1950–80 aid from every donor had had the same productivity (a highly optimistic assumption), per capita incomes in developing countries might have been 20 percent above their actual levels. While 20 percent is significant, it does not make a poor country into a rich one. And, since the allocation of aid was skewed among countries (with some early recipients such as Brazil and Korea now regarded as middle-income countries), the impact for many of the others would have been smaller. This point is relevant to the extent that some criticisms of aid seem to imply that, if aid had been truly effective, it would have solved the development problem. Any fair assessment of aid must recognize that it has been small relative to the task of development.

The question, then, is what uses of aid are likely to enhance economic efficiency and growth? Several related issues must be addressed. The first is that the government-to-government nature of aid suggests constraints on and guidelines for its effectiveness. The second is the fungibility of aid, which again highlights the importance of the policy environment. A third is whether and how aid can be effective if policies are not conducive to economic efficiency. On the first two issues, the discussion assumes that the recipient government's aim is to use aid to maximize the economic welfare of its citizens, and that this goal could be achieved by allocating resources to activities with the highest rate of return.[14]

Government-to-Government Aid

Foreign aid is usually extended by one government to another. Since private economic activities might normally be expected to qualify for commercial financing, there is some presumption that foreign aid might have a comparative advantage in financing government expenditures, and especially investment. However, the fact that governments receive foreign aid does not mean that they must decide its allocation. Aid can finance private ventures through institutional means such as development finance banks and agricultural credit institutions. And, where policies have been interventionist, aid can dilute the effect of these policies on the private sector—notably by providing foreign exchange that eases the impact of import licenses. Nonetheless, some aid can and should be directed to government activities, and especially investments. Some investments increase capacity for individual economic activities (such as machinery, equipment, and on-the-job training); others are for infrastructure or social overhead capital (such as roads, communications, ports, primary education, and so on). The emerging view of development questions the desirability of governmental involvement in the first category. But the second group is generally accepted to be the responsibility of government largely because it has some features of a public good. Either there are large indivisibilities (so that additional utilization can initially take place without sharply increasing the costs to existing users) or user charges would have to be so high as to be infeasible. In addition, an efficient infrastructure created by the government brings direct benefits to the private sector.

Although traditional thinking emphasized the physical aspect of developing an infrastructure, evidence increasingly shows the importance of institutional development (such as agricultural research and extension activities,[15] delivery systems for public services such as education, health,

and communications). Here, too, there are aspects of public goods, especially in the early stages of development. Moreover, the efficiency of some of these investments may be significantly increased by the organizational or technological know-how of foreign donors.[16]

Fungibility of Aid

The aid literature has long discussed whether aid should finance individual projects or support a country's overall development program. The argument for project finance has largely been presented in the preceding paragraphs: along with capital, it permits the transfer of skills, organizational procedures, and technology. The counterargument has two related parts: (1) because money is fungible, aid has the effect of freeing resources for other projects (see Singer 1965 for the classic statement of the dilemma); and (2) the macroeconomic environment affects the returns on individual projects to such an extent that aid used to improve that environment might have a much higher productivity than if it simply increased the infrastructure within a framework of inadequate policies, and program aid may be more effective than project aid for this purpose.

These issues cannot be easily resolved. On the one hand, even with project finance, donors may be able to influence the policies of recipients. On the other hand, no government will abandon all its domestic policies to the dictates of foreign donors, and the extent to which program aid permits policy influence will vary.

In practice, the mix of project and program aid that most improves the welfare of recipient's nationals probably depends, for example, on the degree to which donor and recipient objectives coincide, the receptiveness of the government to policy advice, the appropriateness of existing policies, and a recipient's stage of development. As a country's savings rate rises and its creditworthiness improves, the productivity of foreign aid will depend increasingly on the extent to which it supports policy reform.

Inappropriate Policies

In some countries, prospects for growth will be unsatisfactory until policies are significantly reformed. Sometimes the government is unwilling or unable to make such reforms. If, nonetheless, a donor provides aid for humanitarian or political reasons, are there types of aid that can improve living standards?

Clearly, in these circumstances, program aid cannot be defended. But two possibilities deserve consideration: (1) projects that will yield positive real returns under existing policies and would continue to do so if policies were to be reformed later, and (2) projects that might not yield a positive return under the existing regime but would raise the payoff to policy reform at a later date. There have been positive real rates of return on aid-financed projects, even in countries with manifestly inappropriate policies and low growth rates. These include investments that raise peasant and smallholder productivity, that increase transport and power capacity, and that do not depend on existing inappropriate incentives for their relative profitability. The experience of countries that have reformed their policies shows that certain projects can lay a basis for faster economic progress by absorbing educated labor rapidly into productive employment and increasing the rates of utilization of their infrastructure. The spectacular spurt of growth in Korea after the policy reforms of 1960–64 was undoubtedly far more rapid and sustained than would have been possible had the educational standards of the labor force in 1960 been no greater than what would have yielded a satisfactory rate of return in the prereform years. Although empirical evidence is lacking, there are a priori grounds for thinking that investments in increasing capacity with long gestation periods may make sense even if the payoff under the existing policy regime is small.[17]

Criticisms of Aid

Many of the critics of foreign aid reject it on ideological grounds. Either aid perpetuates dependency and perverts domestic development (a view put forward, for example, by Hayter 1971), or it permits governments to "escape the burdens of their foolish economic policies" (Krauss 1983, p. 158). The first argument is based on a political model of economic behavior that rejects most economic analysis and thus challenges the tenets of economics. The second criticism accepts the basic neoclassical view and argues that aid is unproductive in conventional terms because it is aid.

Despite these extremes, most professional economists tend to think that whether aid is effective—that is, whether it has a sufficiently high marginal product—is an empirical question that can be addressed only with empirical evidence. Moreover, even when aid is less productive than might have been hoped, a secondary question is whether that low productivity is inherent in the aid process or whether instead lessons can be learned and productivity raised. In fact, there has been surprisingly little empirical work on many facets of aid—another feature of its peculiar history.

This section discusses three issues with potentially serious implications for the productivity of aid. The first is the degree to which aid may simply substitute for domestic savings rather than raise investment. The second is the role of aid in affecting the allocation of resources between the private and public sectors. The third is the concern that aid diverts scarce administrative resources from other, higher-productivity work.

Aid and Savings

On the issue of aid and savings, two related criticisms have been made. One is that countries receiving aid do less to provide incentives for domestic savings; the other is that they are likely to have more overvalued currencies than would otherwise be the case.[18] The first proposition has two versions: (1) at a given level of income, the domestic savings rate in a recipient is less than it would be in the absence of aid; and (2) at a given level of income, investment is lower than it would be without aid. The first proposition asserts that the recipient will allocate its aid partly for present and partly for future income. The second proposition is more extreme, implying that aid is more than offset by increased domestic consumption.

The first proposition, that the marginal propensity to save is less than one, accords with economic theory and, therefore, is empirically testable. The second proposition, which essentially posits a negative propensity to save, is more extreme and is a priori impossible. Since government macroeconomic policy is a prime determinant of how an economy reacts to the receipt of aid, any outcome, in principle, is possible. Governments committed to the goal of economic growth would adjust macroeconomic policies to foster higher investment as a consequence of receiving aid. Alternatively, they might fail to adjust policies in ways conducive to higher investment, and domestic savings would decline or domestic consumption rise in response to aid. This latter path would be more likely the more the exchange rate appreciated when aid was received.

Economists have therefore attempted to estimate, usually by cross-section analysis, the effects of aid on domestic savings rates. These estimates suffer from various defects. To the extent that aid has successfully stimulated domestic policies and resulted in faster growth, countries leave the ranks of aid recipients. Since the motive for aid is often that domestic prospects are otherwise unsatisfactory, aid may be biased to countries with below-average performance. Several studies have nonetheless attempted to estimate the relation between aid and investment. A study by Weisskopf (1972) reached the most negative conclusion. He posited an ex ante relationship between savings, income, all inflows of foreign capital (including aid), and exports of the form $S = f(Y, F, E)$, where S is ex ante savings, Y income (regarded as exogenous), F the foreign capital inflow (also regarded as exogenous and defined as the trade account deficit in the balance of payments), and E total exports. Weisskopf pooled time-series and cross-section data on seventeen countries, found a highly significant impact of capital inflow on savings, and estimated that about 23 percent of foreign capital inflows were offset by declines in domestic savings. Other authors, including Bhagwati and Srinivasan (1976), Gupta (1970), and Papanek (1972), have shown different results, generally suggesting a positive marginal propensity to save, so that a part of aid might be offset by extra consumption.[19]

Given the variety of macroeconomic policies and objectives of developing countries (not to mention levels of income and other differences), it would be surprising if the impact of aid on domestic savings were the same in all cases. Additional research could usefully be focused on analyzing the types of policies that recipients can adopt to affect the domestic savings response to aid.

The Public and Private Sectors

The second concern is that, since most aid goes to governments, it necessarily strengthens the role of government in the economy and weakens the private sector. While this may have happened in some instances, the proposition, as a logical necessity, does not withstand close inspection on three counts.

1. Some government-to-government assistance in fact leads to a relaxation of controls and improved functioning of markets and the private sector. Consider a developing country in which past economic mismanagement has resulted in a highly overvalued exchange rate and stringent import licensing. The latter implies that all private entities requiring imports must conform to governmental criteria—a major instrument of control for the government. If a donor were to propose lending to finance imports in return for an exchange rate adjustment and abandonment of import licensing, that would represent a major reduction in the degree of government control over the private sector.[20] There seems to be an implicit assumption that it is only command over resources that gives the government power to influence the private sector; in fact, bureaucratic and administered controls can be far more detrimental.

2. The assumption that any governmental activity is necessarily at the expense of the private sector ignores the essential infrastructure investments—in roads, ports, flood control, and the like—that are not only inherently the business of government but are essential to satisfactory economic growth. Although it is widely recognized that many developing countries' governments have allocated resources to activities in which they have little or no comparative advantage, it is less frequently recognized that those same governments have also hampered growth by failing to allocate enough to those necessary functions in which they do have a comparative advantage. In most developing countries, resources are so scarce that it is implausible for the government to be "too big," in the sense of having adequately provided infrastructural support for growth, while simultaneously having enough resources to take over private sector activity.

3. The fact that resources are given to governments does not necessarily mean that they have command over them. For example, aid channeled to development finance corporations or other financial intermediaries can give those bodies the real control over how the money is spent, even though governments were the national recipients.

Thus, the conclusion must be that proper allocation of scarce governmental as well as private resources is an important condition for satisfactory growth. That allocation depends on several factors: appropriate macroeconomic signals (including the exchange rate, agricultural and energy pricing, the absence of high levels of protection to domestic industry, and a well-functioning capital and labor market) and the provision of infrastructure to support private sector development. Aid can assist or hinder that allocation, depending on the conditions under which it is extended and the uses to which it is put. Judgment as to what aid has actually accomplished would have to be made individually for each country and each period.

Administering Aid

The third concern, that foreign aid may have diverted scarce administrative talent in recipient countries from other essential tasks, is the least documented of the three criticisms of aid considered here. Stories abound of multiple aid missions to countries that tie up top officials for long periods. Again anecdotally, some aid-financed projects have been successful but have diverted skilled manpower from other, possibly more important tasks. Although such instances have no doubt occurred and suggest the desirability of coordination among donors, the argument has another side: foreign aid has often been a major source of technical assistance and finance for improving administrative skills. Aid has financed countless programs to train officials overseas, to establish and expand educational institutions in developing countries, and to finance technical assistance programs which employ expatriates as managers and administrators.

In the absence of careful empirical research, there is no basis on which to evaluate the impact of aid, both positive and negative. On a priori grounds, however, it is difficult to argue that aid has had a negative impact on administrative resources.

Lessons Learned

Since the 1950s, much has been learned about development and also about the practice of aid. That learning has been uneven: much new knowledge about development has been useful for formulating and running aid programs, but research on aid and its effectiveness has lagged far behind. Knowledge of development policy and how it affects aid ranges from details about the best ways of providing technical assistance to a broad understanding of the development process. To report on all the lessons is far beyond the scope of this survey.[21]

Anne O. Krueger

There are, however, some general precepts on which most observers of aid and development would agree. These include the importance of channeling development programs in ways that are compatible with individual incentives and prevailing market conditions, and the vital role of macroeconomic policies in determining the return on individual projects in developing countries.

With regard to the first, many well-intentioned programs that pinpointed an area for improving development prospects have foundered because they failed to recognize individual incentives and their importance in determining individual behavior. These failures have ranged from family planning programs that did not understand peoples' motives for wanting large families to the provision of subsidized rural credit directly to the rural poor. In general, programs that attempt to alter individual behavior will seldom work unless the incentives confronting people are understood and appropriately modified to make it in their self-interest to change. Similarly, when programs are designed to "fight the market," they are likely to fail or, at best, to be extremely costly. Examples of this latter group include the attempts in some labor-abundant countries to provide jobs for rural workers at wages above going rates. In most such cases, the jobs contractor was found to pocket a significant fraction of the excess wage or to charge workers a front-end fee for their jobs.

The second lesson, about the role of macroeconomic policies, is no less important. Although aid has undoubtedly financed some costly projects, the biggest difficulties have arisen in the context of inappropriate macroeconomic policies. Indeed, regardless of the soundness of an individual aid-financed project, growth is likely to remain slow when domestic policies discourage it. In that environment, one major contribution of aid will be in the policy dialogue and donor influence, if any, that can bring about effective and timely reforms. Because individual projects earn their returns in a milieu influenced by overall economic policy, project financing is not likely to maximize the donor's impact on the recipient's growth unless macroeconomic policies are either already appropriate to growth or beyond influence. In the latter case, some types of projects may nonetheless yield positive returns and thus speed up overall growth (even within the unsatisfactory framework), or else lay the foundation for higher growth should policy reform later become feasible.

As the influence of the policy framework has become increasingly appreciated, policymakers in developing countries (as well as aid officials) have altered their emphasis. To a large extent, increased understanding has informed the aid process—which, one hopes, will make it more effective.

This still leaves a large agenda for research. If understanding of development—and even of what aid can do as a theoretical proposition—has increased, empirical research has lagged far behind. Many

developing countries, some now in the middle-income group, received aid thirty or more years ago. There have been natural experiments, such as community development schemes, overseas training programs, public health programs, and so on. Although much has been learned, economists could do far more to examine empirically the impact of aid and its effects.

Abstract

This article examines the economic effects of aid and the relationships among private capital flows, official flows, and concessional assistance. It considers whether official and concessional flows improve the welfare of both recipient and grantor, and it outlines the economic rationale for concessional assistance. The impact of aid on a recipient's growth performance is analyzed, and some criticisms of aid are evaluated.

Notes

1. For a survey of current understanding of some of these project and sectoral issues, see Krueger, Michalopoulos, and Ruttan (forthcoming). There is also a significant literature on individual country experiences with aid, and some analysts have addressed the question of the impact of foreign assistance on donor countries and the global economy, but these issues are not dealt with here.

2. If procurement is tied, the value of the grant is reduced by the excess price over the international price. This, however, is hardly ever computed and is not taken into account in the official data.

3. An important question is the classification of loans which carry market rates of interest but maturities longer than can be obtained commercially. The market rate for such loans is not observable, so the grant component cannot be calculated. However, it would clearly be wrong to treat such a loan as entirely nonconcessional. This consideration matters in evaluating the role of official and concessional development assistance.

4. See Bhagwati (1970) for a good discussion of these issues. Schultz (1960) provided the classic estimate of the effect of Public Law 480 on the recipient.

5. Usually motivated by humanitarian concerns, private donors contribute to these organizations, which in turn undertake assistance programs. Some NGOs also receive cash, services, and commodities from official sources. In recent years NGOs have provided about $2.3 billion a year in aid, compared with about $32 billion of official concessional flows. Economic analysis of NGO activities could follow lines similar to those spelled out here. In practice, NGOs have been little involved in discussions with recipient governments of macroeconomic and incentive policies and have concentrated their assistance on particular target groups or projects.

6. See Hirschman (1982) for an exposition of this view.

7. With maximizing agents, removal of distorted incentives can bring about a once-and-for-all gain. Thereafter, resource accumulation and changing technology provide the basis for further growth, although the returns to resource accumulation and new technology are higher under appropriate incentives.

8. See Michaely (1962) for an indication of the extent of concentration at that time. The situation has changed considerably since: in 1983, it was estimated, about 55 percent of exports from developing countries consisted of primary commodity exports.

9. Chenery and many others recognized the importance of reducing the bias of incentives toward the home market and against exports. As Chenery pointed out in private correspondence, "In retrospect, it was the need to analyse the demand for external capital from many aid recipients together that led to the use of the simplifying assumption of exogenous exports (varied in alternative solutions) as in Chenery-Strout [1966]. The persistence of this formulation is probably due more to the simplicity of its algebra than to a belief that

elasticities are zero." It might also be argued that the two gap model led many adherents to ignore issues of substitution and incentives, even though the model's developers were aware of these shortcomings and their implications.

10. There are still "structuralists," who believe that response to changes in incentives is so slow that reliance on incentives and the usual tools of analysis is inappropriate. Taylor (1983) is a prominent exponent of that view. The difference is, of course, one of emphasis. The structuralists would surely not deny some response to altered incentives, and no one who has worked in a developing country would claim that all markets work efficiently. The question is whether governments should substitute for perceived market imperfections or devise policies to reduce them, while simultaneously providing necessary governmental services (see the next section).

11. This would happen in the simple 2 × 2 Heckscher-Ohlin-Samuelson model of trade if factor endowments differed so much between countries that trade could not fully substitute for factor mobility. Complete specialization would result in a model with constant returns to scale and no transport costs, and free trade (but no factor mobility) would be consistent with a higher rate of return on capital in the relatively labor-abundant countries.

12. This discussion ignores the risks associated with investing and how they may be affected by implicit or explicit guarantees from recipient governments. For the bulk of infrastructure investments, however, this consideration does not apply.

13. The capital flows of the 1970s were heavily oriented toward the so-called middle-income countries. Although some low-income countries increased their use of these markets a little, by the early 1980s it was clear that they had been ill-advised to do so. Their development has not yet proceeded enough for them to rely on commercial borrowing for as large a fraction of capital as they attempted in the 1970s. See below.

14. In effect, this is equivalent to assuming that the best way of helping poor people is to increase their future income and earnings, and that investments for this purpose have a sufficiently high return to be included in the investment program. Especially in poor countries, the scope for improving the welfare of the poor through redistribution is extremely limited; moreover, empirical evidence strongly suggests that poor people's incomes rise faster in countries achieving faster growth. Evidence is also mounting that, where income distribution has worsened with growth, much of the fault has been due to inappropriate incentive policies (see Myint 1985).

15. See Ruttan (1982, pp. 17-44 and 237-61) for an analysis of these issues.

16. Although I have nowhere seen it documented, observers in both Korea and Turkey believe that the entrepreneurs and skilled workers who achieved such success in winning foreign construction contracts in the 1970s and 1980s gained their skills on American aid-financed projects in the 1950s.

17. The investments in human capital that have high potential returns probably center largely on primary education. Many developing countries with inappropriate policy frameworks have expanded their university enrollments faster than warranted and neglected primary education.

18. As will be discussed below, it is also possible that the "knowledge component" of aid might render investment more productive than would otherwise be the case; there would thus be gains over and above those resulting from the incremental investment and consumption financed by aid.

19. See Krueger, Michalopoulos, and Ruttan (forthcoming, chap. 4 by Vasant Sukhatme) for a fuller survey of this literature.

20. There are several instances in which this type of reform has produced major benefits for economic growth. For a summary of some episodes, see Krueger (1978, chap. 10). For an analysis of the reasons why the recipient government could not successfully relax controls without assistance, see Krueger (1978, chap. 7).

21. See Krueger, Michalopoulos, and Ruttan (forthcoming), on which this section draws, for more detail on the aid experience.

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